



WHAT'S NAEP EVER DONE FOR ME?

CLASSROOM TOOLS FROM NAEP AND NCES

By Mike Chapman, NAEP State Coordinator 2012 Montana State Assessment Conference Helena, January 19, 2012

Why should we care about NCES and NAEP?

- "NCLB" has shifted our gaze from a multitude of ways to assess education and toward "making AYP."
- NCES is the nation's master educational data repository, with broad-based information on myriad aspects of learning.
- NAEP, the "nation's report card," since 1969, is the assessment tool used to measure and report the course of educational achievement accurately across decades.



What's in a Name?

- U. S. DOE U. S. Department of Education
- NCES the National Center for Education Statistics
- NAEP the National Assessment of Educational Progress
- MontCAS Montana's criterion-referenced test (CRT)
- Web Sites rafters, crawl spaces, and the Internets
- Web Site Tools in this presentation, applications from NCES and NAEP developed to enrich understanding and classroom learning



Name, continued

- NAEP is the one tool we have to make meaningful comparisons among all jurisdictions (Nation, States, District of Columbia, Department of Defense).
 - Each jurisdiction's NAEP results are "nested" inside the national dataset.
 - Comparisons between jurisdictions reveal similarities and differences among them.
- The Take-away: Montana is a lot more like the rest of the U.S. than we like to admit.
 - NAEP is a valuable tool in understanding where we fit within the whole.
 - We share problems and possibilities with others and can learn a lot from one another.



Questions I hope to answer today

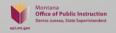
- What tools are available on the NCES and NAEP Web sites that teachers can use day-today in the classroom (or use to make sense of classroom results)?
- Can I make meaningful connections between my class results and the nation as a whole?
- How can a summative test like NAEP help me create local formative assessments?
- Any other questions you'd like to ask



Time is short; we can't cover everything

- The tools available on NAEP/NCES Web site are much too broad to cover in an hour.
- What, then, would be the most useful focus?
- I see several basic topics addressed in the tools:
 - Pedagogy all about teaching (NAEP Questions Tool (NQT), Test Yourself)
 - 2. **Student access** KidZone, challenging, fun questions, national comparisons)
 - 3. **Assessment*** formative information (NQT, metaphorical thinking)
 - 4. Analysis*, including Montana's results vs those of others (State Comparisons Tool (SCT), NAEP Data Explorer (NDE))
 - 5. NAEP vs MontCAS (CRT) *

^{*}The last three would be nice, but might require a semester course!



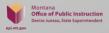
A Few Big NAEP Facts

- NAEP achievement Levels are not comparable to state achievement Levels.
 - Proficient(NAEP) (is NOT equal to) Proficient(State). The fact that the words are the same for Proficient and Advanced is a costly (common) mistake that has created much mischief.
 - This non-equivalence is so well documented, it makes me wonder about the loud and influential people who continue to treat them as the same thing.
- NAEP was designed first as a national test, intentionally noncompetitive, and focuses on trends in educational achievement.
 - Part of the War On Poverty of the '60s (We lost.)
 - Was extended to provide state results in 1990
 - Was further extended in 2005 to provide results for very large districts, e.g., NYC, all of which have more students than several states, e.g., Montana
- In 2000, NAEP became compulsory for reading and math in grades 4 and 8 for all schools in any district receiving Title I funding.
- Other subjects are voluntary.



Example Differences between NAEP and State Standards

- □ "Proficient achievement is defined by NAGB as "solid academic performance exhibiting competency over challenging subject matter."
 - (Page 2, NAEP Achievement Levels for Reading, http://www.nagb.org/pubs/readingbook.pdf)
- "...it is important to understand clearly that the Proficient achievement level does not refer to "at grade" performance."
 - (Page 2, <u>NAEP Achievement Levels for Reading</u>, http://www.nagb.org/pubs/readingbook.pdf)
- "...the NAEP definition of 'Proficient' differs from the State definitions used for No Child Left Behind accountability purposes..."
 - (Secretary Margaret Spellings' testimony before the Senate Appropriations Subcommittee on Labor, HHS, and Education, March 14, 2007)



NAEP and State Test Results

- Tests not directly comparable
 - different test, different standards, different design, different aims, different students (sample).
- Better metaphor: NAEP a "second opinion" about the state of student achievement.
- Watch for NAEP to increase in prominence as a common yardstick of assessment.
- This will probably happen even when the Common Core assessments are implemented.

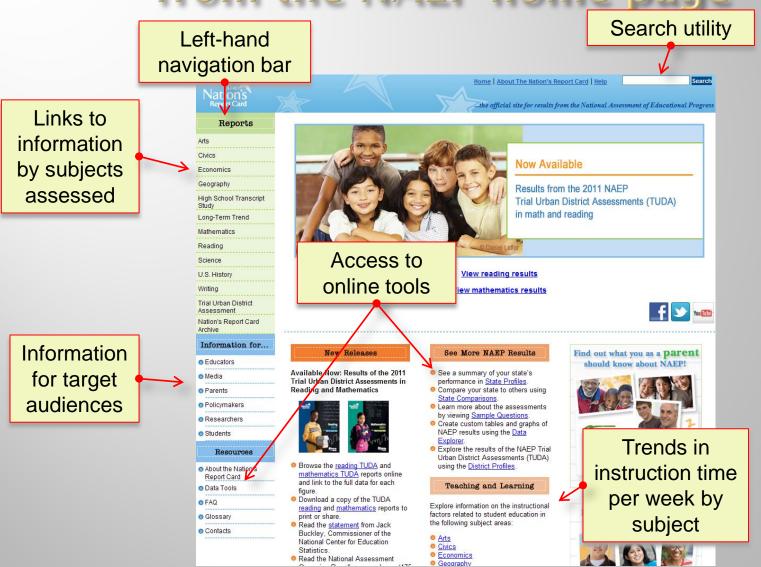


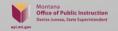
Now, on with the show!

- Direct link to the NAEP Web site: http://nationsreportcard.gov/
- NCES Web site: http://nces.ed.gov/
- NAEP Web site via NCES: http://nces.ed.gov/nationsreportcard/



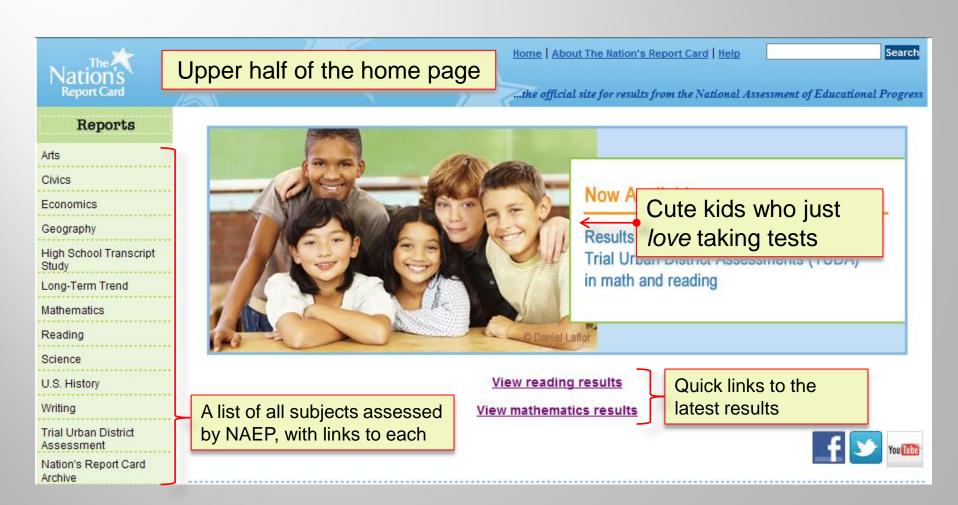
All of the tools are available from the NAEP home page





Getting to the NAEP home page (1)

Direct link to the NAEP Web site: http://nationsreportcard.gov/





Getting to the NAEP home page (2)

Lower half of the home page

Information for...

- Educators
- Media
- Parents
- Policymakers
- Researchers
- Students

Resources

- About the Nation's Report Card
- Data Tools
- FAQ
- Glossary
- Contacts

Each of these links takes you to a new page with targeted information.





The "data tools" appear in both lists. This is intentional redundancy; several avenues will take you to any of the features of the Web site.

See More NAEP Results

- See a summary of your state's performance in <u>State Profiles</u>.
- Compare your state to others using State Comparisons.
- Learn more about the assessments by newing Sample Questions.
- Create Astom tables and graphs of NASP results using the <u>Data</u>
 Explorer.
- Urban District Assessments (TUDA) using the District Profiles.

Teaching and Learning

Explore information on the instructional factors related to student education in the following subject areas:

- Arts
- Civics
- Economics
- Geography
- Long-Term Trend
- Mathematics
- Reading
- Science
- U.S. History
- Writing

Does more class time in a subject relate to higher scores on NAEP? Some answers are surprising.



Example Audience: Educators

Educators

Information for educators about The Nation's Report Card







(left to right): BananaStock, Brand X Pictures, American Images Inc

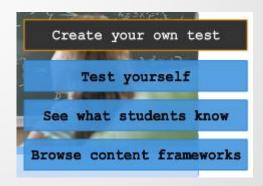


Create your own test

Use released NAEP questions, available in the NAEP Questions Tool, to create a test? Select a subject and choose items appropriate for what you are teaching. You can also print or download your items with the answers and sample student responses.

Browse content frameworks

Create Your Own Test: the NQT



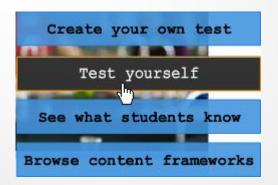
Create your own test

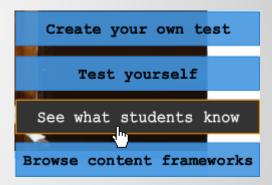
Use released NAEP questions, available in the NAEP Questions Tool, to create a test. Select a subject and choose items appropriate for what you are teaching. You can also print or download your items with the answers and sample student responses.

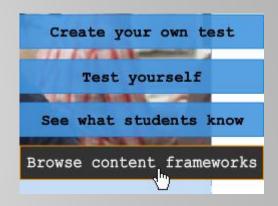
- The NAEP Questions Tool is probably the most popular tool on the Web site with both teachers and students.
- Items released from NAEP testing through the years number over 2000 (and counting).
- An extended example of its use is given a few slides hence.



Example Audience: Educators







Test Yourself

Try sample <u>NAEP Questions</u> in a variety of subjects for yourself. At the end of the quiz, see how students across the nation performed.

Test Yourself is fun. No scores are kept, but you may want to shut your door to avoid ridicule by passing students.

See what students know

The NAEP item maps illustrate the knowledge and skills demonstrated by students performing at different scale scores on each assessment. Click the question links in the item map to see the complete item, scoring guide, student responses, and information on how students nationwide or in your state performed.

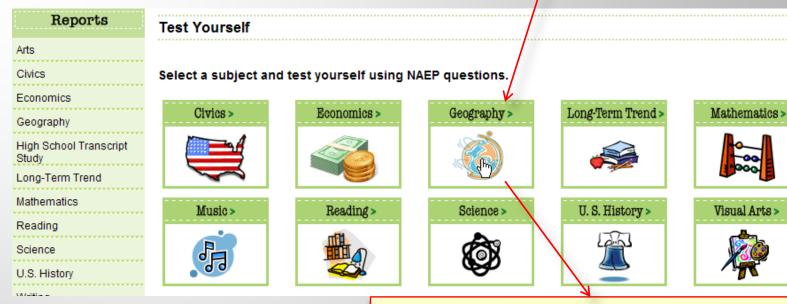
Browse content frameworks

Each NAEP assessment is built from a content framework that serves as a blueprint, specifying what should be assessed. The National Assessment Governing Board, which sets NAEP policy, also develops the <u>frameworks</u> for the assessment.

The last two are not covered in this presentation.



Example of "Test Yourself"



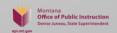
To see additional questions in each subject, click on the direct link to the NQT

Sample Questions

What questions are used in the NAEP geography assessment?

Explore sample questions from the geography assessment, and see how the NAEP geography questions relate to student performance.

- View all the questions released from the 2010 assessment in the NAEP Questions Tool.
- Download the Geography Framework for the 2010 National Assessment of Educational Progress.
- See what students at each achievement level are likely to know and can do by viewing item maps.
- Test yourself in <u>other NAEP subjects</u>.



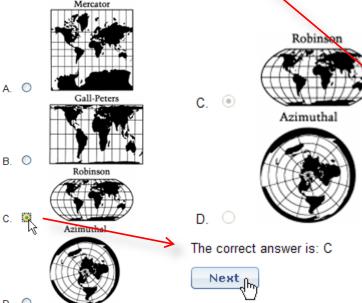
The exercise consists of five questions. When you've answered them all, you will see how your percentage score compares with the nation at each of the four achievement levels, Below Basic, Basic, Proficient(NAEP) and Advanced(NAEP)*.

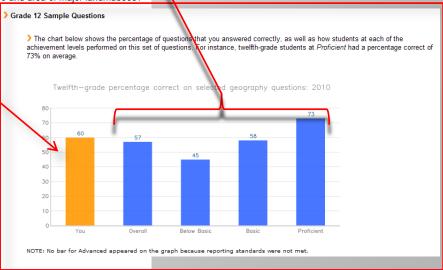
Test Yourself in Geography

Next

Select one of the grade tabs below to try out questions from the 2010 NAEP geography assessment. After answering all the questions,

compare your score with that of students nationally. Grade 4 Grade 8 Grade 12 Grade 12 Sample Questions Question 1 of 5 Which of the following map projections provides the most accurate representation of the shape and area of major landmasses? Grade 12 Sample Questions 73% on average



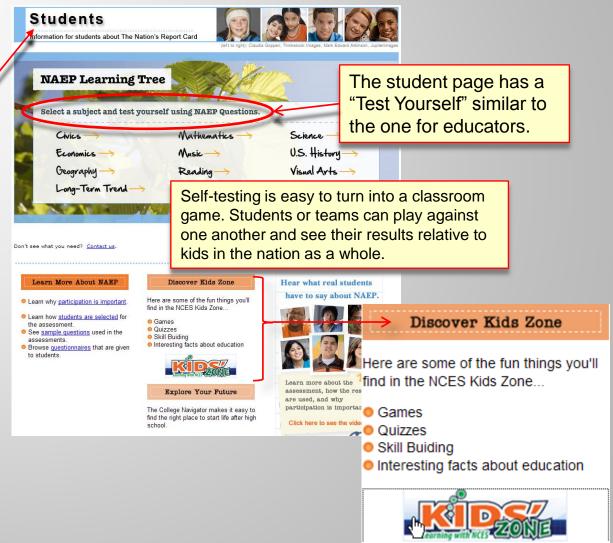


* The achievement levels are subscripted to emphasize that they are not comparable to the state levels, which have different definitions.



Example Audience: Students





















This Day In History



18 January

In 1778, Captain James Cook became the first European to visit the Sandwich Islands, which are now known as Hawaii.

Mind Benders



A man starts at his house to run three miles. He runs straight, and doesn't turn around once. But, he finished at his house anyway. How is this possible?

Get Answer!

Student Poll



Do you think it's possible for a kid to fall in love?

- O Yes
- O No
- O Not Sure



view results

Suggestions? | Archives

DID YOU KNOW?

Approximately 45 percent of fourth graders and 86 percent of eighth-graders in the nation had teachers who reported putting a heavy emphasis on algebra and functions in 2011, an increase for both grades as compared to 2009. (more info)

The NCES Kids' Zone provides information to help

you learn about schools; decide on a college; find

a public library; engage in several games, guizzes

graphing, and mathematicians; and to learn many

and skill building about math, probability,

interesting facts about education.

THE WORD OF THE DAY

detrition -(n.). The act of wearing away by rubbing or friction.

THE QUOTE OF THE DAY

"Education's purpose is to replace an empty mind with an open one."- Malcolm Forbes

SEEKING YOUR SUGGESTIONS

Calling All Kids! We would like to hear from you to find out what other types of activities you would like to see on the NCES Kids' Zone! Please send your comments or suggestions to kidszone@ed.gov



Data Snapshot



Approximately 46 percent of fourth-graders in the nation read for fun on their own time almost every day in 2011.

more



Kids' Zone Tools















Choose Your Search

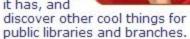
FIND A SCHOOL

If you want to find some information about your school, or any school then you've come to the right place!

- Public School Only
- Private School Only
- Public and Private Schools

FIND A LIBRARY

Get an address, learn how many books it has, and



Find A Library

COLLEGE SEARCH

Find enrollment numbers, what programs are offered and other info for all of the nearly 7.0



of the nearly 7,000 colleges and universities across the nation.

- Search by State
- Search by Region



Kids' Zone Graph















GREATEAGRAPH

Help

Examples

Graphs and charts are great because they communicate information visually. For this reason, graphs are often used in newspapers, magazines and businesses around the world.

NCES constantly uses graphs and charts in our publications and on the web. Sometimes, complicated information is difficult to understand and needs an illustration. Graphs or charts can help impress people by getting your point across quickly and visually.

Here you will find five different graphs and charts for you to consider. Not sure about which graph to use?
Confused between bar graphs and pie charts? Read our:

Create A Graph Tutorial



Line



Pie



XY

Please select a graph type to begin

New to creating graphs? Then try...



28,863,359

Graphs Created Since 2005

Kids' Zone Dare to Compare



















So, how do you compare with students nationally and from around the world?

Pick a subject, a grade and how many questions you want to see (600+ currently in database), then click the **Show Questions** button below.

Where did these questions come from?

What's New

We recently added new questions for 4th grade Math and 8th grade Science! Check back often if you Dare to Compare!

Subject Civics Grade 4th grade 💌 # Questions

Show Questions

Kids' Zone Grab Bag















GRABBAG

MASCOT MATCHING

Play the Mascot Matching game and match the mascot to the proper University.



MATH TEASER

This is a great way to test your math/statistics skills with some fun and interesting questions.



MATHEMATICIAN QUIZ

Complete this profile and learn which famous mathematician shares your interests.



MULTIMEDIA

Watch short videos and try to identify the location of the sculptures.



NCES REPORTS

We always have a current NCES report summarized and with highlights.



NEW EDUCATION DATA

A list of recent NCES publications with links taking you to where they can be found on the NCES website.



EDUCATION OUIZ

Test your smarts about education in the U.S. and the world by taking an interesting quiz.



WORD SEARCH

Good at word search puzzles? Find educational and statistical terms in this word search.



Kids' Zone Chances



















"The probable is what usually happens." — Aristotle.

What many people refer to as 'good luck' can actually be explained by a little knowledge about probability and statistics. Our dice game allows you to see how increasing or decreasing the number of dice rolls affects an outcome. So give it a try, choose the number of rolls you would like to make...

...and roll the dice!

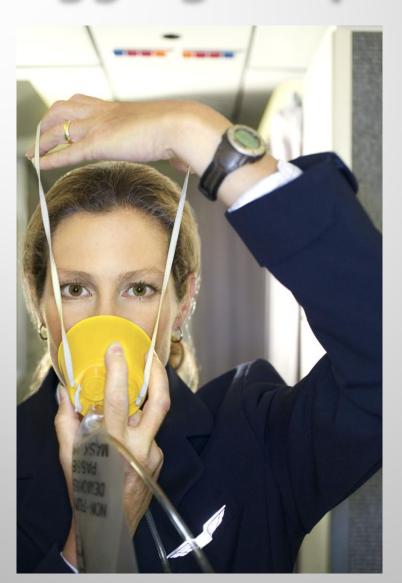
Number of Rolls:

Roll Dice!

"It is a truth very certain that when it is not in our power to determine what is true we ought to follow what is most probable." — Descartes



Digging deeper into the NQT



And now for a demonstration.*

*Caution - trained professional.

Don't try this at home.

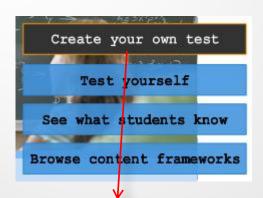


Why Use Released Test Items for Local Test Development?

- Saves time already tied to standards
- Uses real test questions as examples
- Provides students with realistic test environment; lowers test anxiety
- Provides local test design with valid examples
- Extends assessment literacy
- Provides perspective on testing process for teachers and administrators as a professional development opportunity
- Is easily adaptable to formative assessment



EP Questions Tool



Create your own test

Use released NAEP questions, available in the NAEP Questions Tool, to create a test. Select a subject and choose items appropriate for what you are teaching. You can also print or download your items with the answers and sample student responses.



NAEP Questions Tool

Analyze Data | Sample Questions |

State Comparisons

State Profiles | District Profiles

Explore NAEP Questions

After each as essment, NAEP releases dozens of sample questions to the public—more than 2,000 questions are currently available. The tools featured here can be used to supplement classroom instruction, provide additional insight into the content of the assessment, and show what students nationally or in your state or district know and can do. Explore the tools or print a quick reference quide to find out more about NAEP.



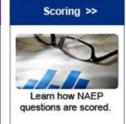


and can do.



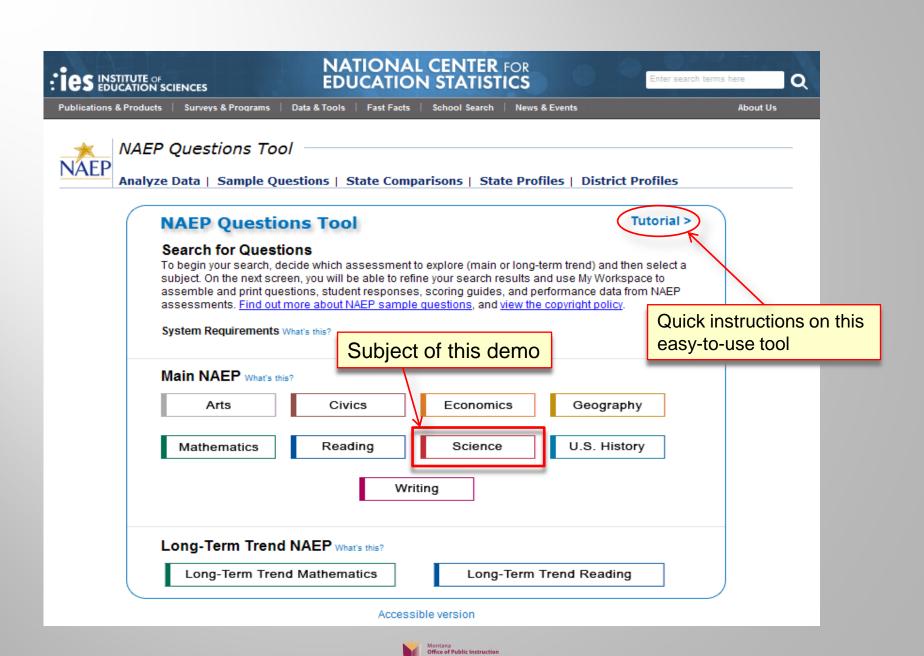
students in the NAEP

assessments.

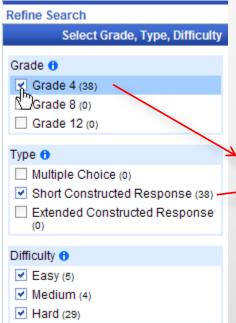


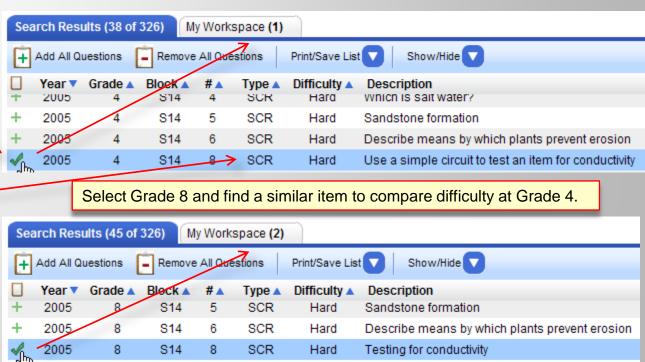
What's New? Results of the 2011

Clicking on the "quick reference guide" link takes you to page with descriptions of all of the tools shown below. One of the links on that page takes you to a short video on the NQT (about 2 minutes long) which is very worth watching.



Refine search, select questions, and build your work space for download.





Search Results (83 of 326) My Workspace (2)												
Year	Grade	Block	#	Туре	Difficulty	Description						
2005	4	S14	8	SCR	Hard	Use a simple circuit to test an item for conductivity						
2005	8	S14	8	SCR	Hard	Testing for conductivity						

Select as many questions as you like. They can then be downloaded in a variety of formats (e.g., Excel) and further sorted and selected for quizzes or drills.

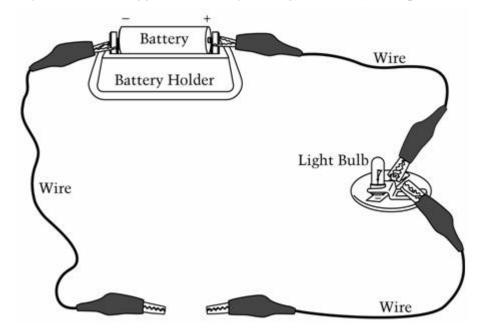


Clicking on the first question takes you to the question itself for review.

Q View Question Detail

Questions 7 - 8 refer to the way electicity is conducted.

8. The picture shows a way you could hook up a battery, three wires, and a light bulb.



Explain how you could use these things to test an item to see if it is a conductor of electricity.

How could you tell?

The fourth grade question requires basic knowledge about current flow and the nature of a completed circuit. The eighth grade question (next) asks students to create their own diagram of a circuit like this one, rather than showing it to them, and then write an explanation of how to use it to test conductivity.



The eighth-grade question extends the one asked of fourth-graders

Sea	Search Results (45 of 326) My Workspace (2)												
Ŧ	Add All Questions Remove All Questions Print/Save List Show/Hide												
	Year ▼	Grade 🔺	Block A	# 🔺	Type 🔺	Difficulty A	Description						
+	2005	8	S14	5	SCR	Hard	Sandstone formation						
+	2005	8	S14	6	SCR	Hard	Describe means by which plants prevent erosion						
₹JhnJ	2005	8	S14	8	SCR	Hard	Testing for conductivity						



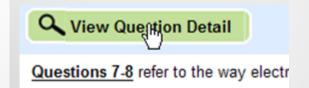
Questions 7-8 refer to the way electricity is conducted.

8. Suppose that you have one of the items from the list in Question 7 that you believe conducts electricity, and that you also have a battery, several wires, and a light bulb.

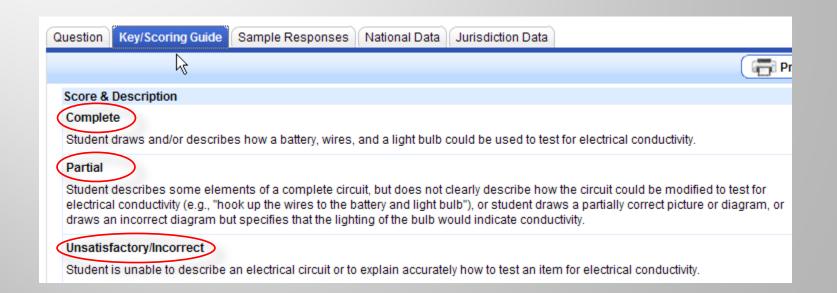
Explain how you could use these things to do a test to find out if the item you chose from the list in Question 7 does conduct electricity. Draw a picture to help explain your answer.



Going into question detail reveals a wealth of information on any item



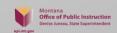
Click on "View Question in Detail" to move from search results to scoring, results, and data.

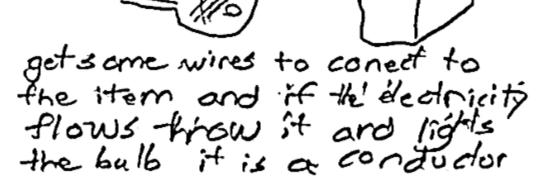






getsome wires to conect to the item and if the electricity flows throw it and lights the bulb it is a conductor





 Suppose that you have one of the items from the list in Question 7 that you believe conducts electricity, and that you also have a battery, several wires, and a light bulb.

Explain how you could use these things to do a test to find out if the item you chose from the list in Question 7 does conduct electricity. Draw a picture to help explain your answer.

you attack the wines onto the lish bulb and then to the battry the you make a goop between the wine them you place the object there and see is the light solf light up.

Scorer Comments:

The first response provides a correct drawing of a complete circuit, and the second response escribes a complete circuit. Both responses explain how the circuit can be used to determine the electrical conductivity of an item.



Partial - Student Response

 Suppose that you have one of the items from the list in Question 7 that you believe conducts electricity, and that you also have a battery, several wires, and a light bulb.

Explain how you could use these things to do a test to find out if the item you chose from the list in Question 7 does conduct electricity. Draw a picture to help explain your answer.



Run 2 wires from the battery to a coin. Then run a wire from the coin to a light bulb, if it lights up then it conducts electricity

Run 2 wires from the battery to a coin. Then run a wire from the coin to a light bulb, if it lights up then it conducts electricity

 Suppose that you have one of the items from the list in Question 7 that you believe conducts electricity, and that you also have a battery, several wires, and a light bulb.

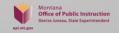
Explain how you could use these things to do a test to find out if the item you chose from the list in Question 7 does conduct electricity. Draw a picture to help explain your answer.

hook who lattery and hook next with about who who who object.

at airing the form of and hook aring the bone of the will the last who who who who will the last and appeal his just and

Scorer Comments:

Neither response is credited for drawing or describing a complete circuit because the first response includes an incorrect diagram of a circuit, and the second response includes an unclear description of a circuit. Both responses receive partial credit for specifying that the lighting of the bulb would determine that an item conducts electricity.



Unsatisfactory/Incorrect - Student Response

 Suppose that you have one of the items from the list in Question 7 that you believe conducts electricity, and that you also have a battery, several wires, and a light bulb.

Explain how you could use these things to do a test to find out if the item you chose from the list in Question 7 does conduct electricity. Draw a picture to help explain your answer.

OBERTIES OF THE PARTY OF THE PA

You put a wire to the light Bulb and hookit to the battery the connect the other wire to the wire the hook that wire to the Key.

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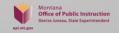
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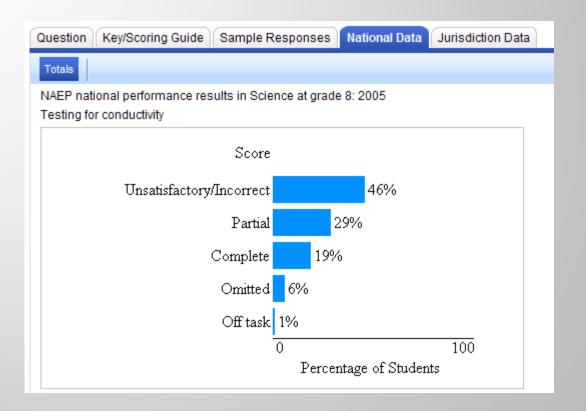
Explain how you could use these things to do a test to find out if the item you chose from the list in Question 7 does conduct electricity. Draw a picture to help explain your answer.

I would connect tax were: to the batterie of to the light bulb. Then when I would put the wire to the brital jost it would conduct electricity.

Scorer Comments:

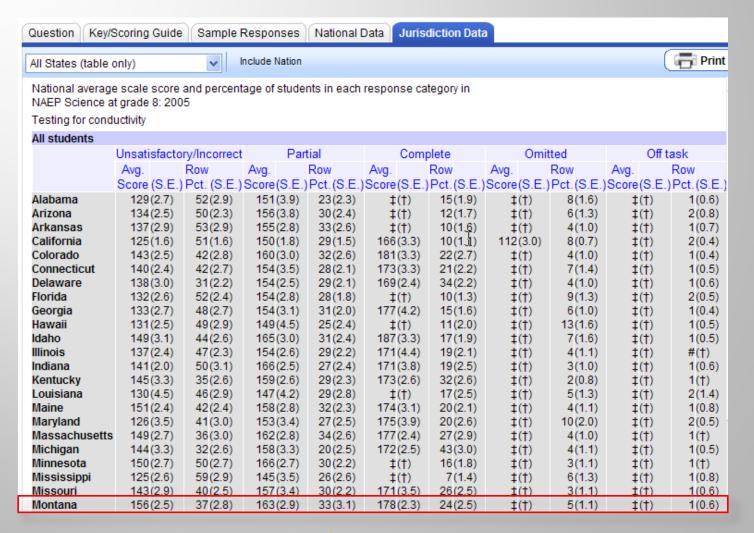
The first response includes an incorrect drawing of a circuit, and the second response includes an incorrect description of a circuit. Neither response describes how the circuit could be used to determine the electrical conductivity of an item.





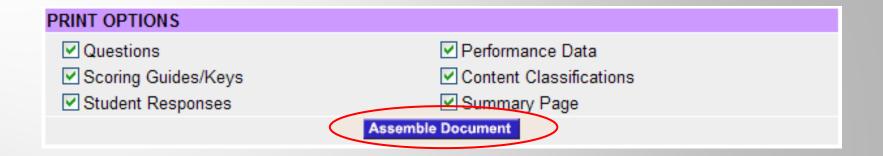


For any question, you can look up actual results by state



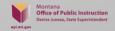


Selecting Print Folder Options



You may want to use the items selected in a number of ways, e.g., to create a quiz or to put in a folder with answers for students to review.

All options can be selected at one time and parsed out later from the HTML file saved following assembly of the document.



URL: NAEP Data Explorer

- NAEP data available on line for broader picture of Montana among the states
- http://nces.ed.gov/nationsreportcard/naepdata/
 - Similar to several other on-line query tools.
 - Allows comparisons by subject, subgroup, year.
 - Advanced search has about 1000 variables to explore for more complete picture and for in-depth research.



Context Variables in the National Assessment

Parental Education and Student Achievement



Context Variables measured during NAEP test administration offer rich opportunities for research.

One of NAEP's key features is a large collection of context variables, combining information from students, teachers, and administrators through questionnaires filled out at the time of testing and connected to individual test scores (anonymously). They can be extracted and analyzed like any other NAEP data available through the online tools that provided data for this report.

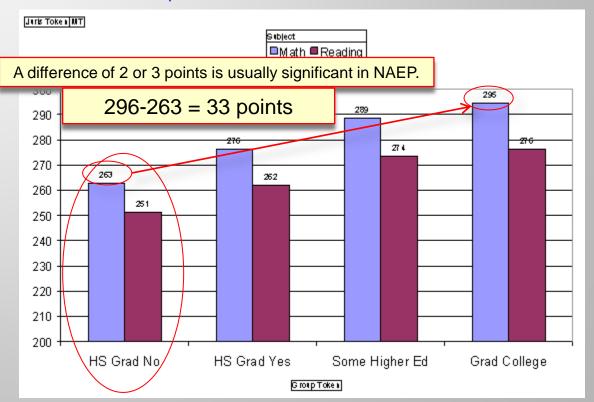
Question: Is there a correlation between parental education attainment and NAEP scores?

Answer: There is a strong positive correlation between parental education attainment and NAEP scores

The bars on the left shows average NAEP scale scores for students whose parents did not graduate from high school. This group (HS Grad No) will come up again in the next chart.

Data used to create this chart is available publicly using the NAEP Data Explorer at nces.ed.gov/nationsreportcard/

The NDE provides access to a great many context variables on a wide range of topics, like student attitude and motivation, with their related NAEP scores..



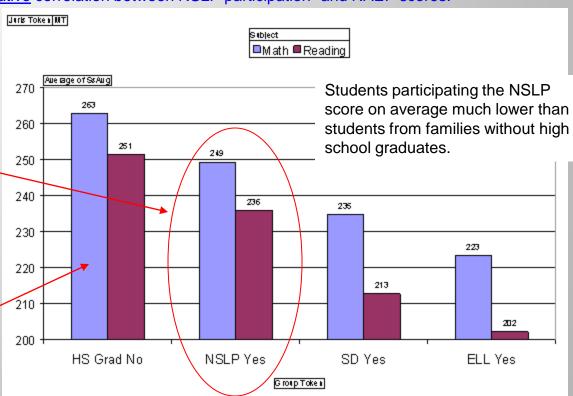
Socioeconomic Status (SES), like family educational attainment, has a strong correlation with NAEP scores. Few, if any, variables are as strongly correlated with educational progress.

A high school diploma is a virtual necessity for employment and access to higher learning opportunities, and depends increasingly on the results of high-stakes state testing in high school. In many ways, poverty is a self-reinforcing impediment to achievement throughout school and into adult life.

Question: Is there a correlation between general family wealth and NAEP scores?

Answer: There is a strong <u>negative</u> correlation between NSLP participation* and NAEP scores.

This chart shows the average NAEP scale score for students participating in the National School Lunch Program (NSLP), students with disabilities, and English Language Learners, plotted on the same scale with scores for students whose parents did not graduate from high school. (See previous question.)



^{*}The common proxy for family socioeconomic status is participation in the National School Lunch Program (NSLP).



Questions?

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